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Preparing for a Lumbar Puncture

Clinical Center

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Preparing for a Lumbar Puncture

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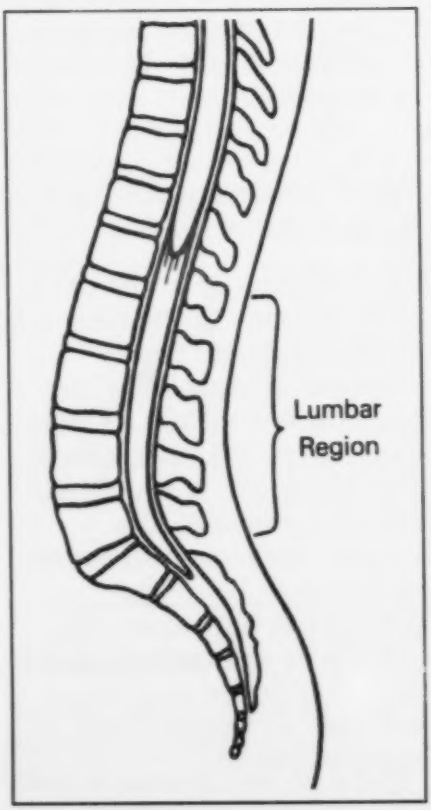
What is a lumbar puncture?

A lumbar puncture is a common procedure used by your doctor to examine cerebral spinal fluid (CSF). The test involves obtaining CSF through a needle inserted into the lumbar region of the lower back.



Examining CSF is a good way to assess the status of the brain and spinal cord. The findings from this test provide chemical, microscopic, and bacterial information about brain function.

What happens before a lumbar puncture?

The test will be explained thoroughly to you before it is performed. When you understand the procedure, you will be asked to sign a consent form. The form has spaces for signatures from you, your doctor, and a witness, usually a nurse.

In order to assure good results from the test, you will be asked to observe these restrictions:

- On certain units, you will be asked to stay on a special "low monoamine" (LMA) diet. This diet must be followed for 3 days before the test. The regimen is low in caffeine and certain amino acids that, if present, could

alter the results of the lumbar puncture.

- From midnight on the day of the test, smoking, eating, and drinking anything but water are not permitted until after the test.

- Do not take any prescription or over-the-counter medications. Even aspirins or cold preparations could alter the results of the test. Illegal or mood-altering drugs must not be taken.

- You will remain in bed for a prescribed number of hours before the lumbar puncture. However, on certain units, some activity will be allowed on the morning of the test. Before the test, you must be lying flat in bed: resting, but not sleeping. Any strenuous or stressful activity may alter the results.

- On some units, you will not be allowed to receive or make any phone calls, visit with others, watch television, or use the radio until the test is completed. Until the procedure begins, your vital signs will be taken periodically. Your blood pressure and pulse may be checked every 15 minutes. The morning of the procedure, a needle may be inserted in your arm to obtain a blood sample.

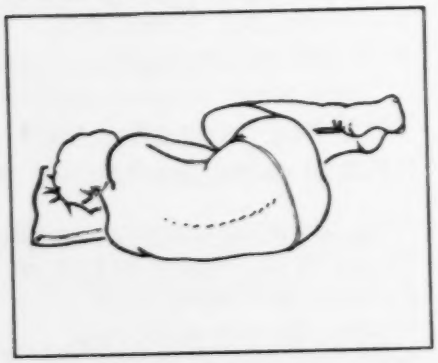
What happens during a lumbar puncture?

The procedure may be done in your room, in the clinic, or in the treatment room. Before beginning the procedure, your doctor will examine your eyes to check CSF pressure. If you have elevated pressure, the lumbar puncture will not be performed. If the CSF pressure is not raised, the procedure will take place, and your doctor and nurse will help you assume the correct position.

There are two positions usually used for the lumbar puncture. These positions increase the space between the vertebra to allow easier access and smoother needle insertion.

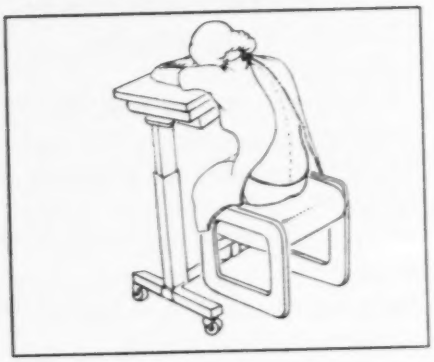
Lying Position

You will be asked to lie on your left side with the lower part of your back at the bed's edge. You will curve your back by curling up in a fetal position. A firm, flat pillow may be placed under your head to keep your body in the correct position.



Sitting position

For the sitting position, you will sit on a chair or stool. Your arms will rest on a bed table with your hands against your forearms.



Alternate Sitting Position

Sometimes, another sitting position may be requested. You will straddle a straight back chair and face the chair's back. Your arms will be folded over the back of the chair while your head rests on your arms.

It is important for you not to move during the test. While you are in the correct position, try to relax by taking deep breaths.

To perform the test, the doctor will touch your lower back to feel the bony points of your spine that will locate the proper place for needle insertion. A special pen may be used to mark this place on your back. A cool, colored antiseptic solution will be swabbed on your back. Then, this area will be covered by sterile drapes.

An anesthetic will be given to numb the skin and underlying spaces on your lower back. You will feel a slight sting when this medication is administered. When the anesthetic takes effect, you will feel numbness and, when the doctor touches you, pressure. If you feel any pain or discomfort, please tell the doctor and nurse immediately.

Once the area is numbed, the doctor will insert the spinal needle between the vertebrae. At the beginning and end of the test, a CSF pressure may also be obtained. While CSF is being collected, you will feel pressure, but not pain. It will take about 20 to 30 minutes to collect spinal fluid. Throughout the collection you will be asked to breathe quietly or, in order to increase the CSF flow, to talk or cough. The CSF will be collected in sterile test tubes. When approximately 1 ounce of CSF is obtained, the doctor will remove the spinal needle and apply pressure to the puncture site. Then, this area will be bandaged.

What happens after the lumbar puncture?

After the procedure, you will be asked to remain in bed for a prescribed number of hours. Do not raise your head on a pillow unless instructed to do so: remain flat in bed. Staying in this position will allow time for the puncture site to seal and

will prevent leakage of spinal fluid that could cause a headache. Before resuming your normal activities (including a shower or exercise), check with your nurse.

To replace the volume of CSF removed, you will be encouraged to drink plenty of fluids. You will need to use a bedpan or urinal until you are able to get out of bed. Your nurses will check the puncture site often and will also monitor your vital signs.

What are the side effects of the procedure?

Please inform your nurse if you have any of these side effects:

- nausea, vomiting
- backache or tenderness at the puncture site.
- leakage of spinal fluid or blood from the puncture site
- different body sensations or changes in moving your hands and feet
- headache or neck stiffness
- blurred vision
- difficulty urinating
- feeling feverish.

If you have any questions about this procedure, please feel free to ask your nurse or doctor.

Questions

Answers

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1989